

Application No. 09/809,155
Attorney Docket No.: 00P7500US01

In the claims:

Without prejudice or surrender of subject matter, please amend the claims as follows:

1. (Amended) A computer programming method for use in controlling an automation process, said method comprising the steps of:
providing on a first computer platform a programming by demonstration tool for combining programming of a control program and of its user interface and thereby producing the control program and its user interface at the same time ~~used as both a control program and a visual user interface for said control program~~, said programming by demonstration tool including a library of ~~program~~ widgets, an ~~graphical editor capable of enabling~~ operative to allow editing including manipulating ~~manipulation by a user of a graphical representation of any of said program widgets~~, and an inferencing engine for recording and processing said manipulation to produce executable code; and
providing an input/output module, interfacing with said programming by demonstration tool, for coupling said ~~program~~ widgets to ~~external~~ input and output signals of ~~said an~~ automation process, wherein ~~such that~~ said executable code is used to control said automation process.
2. (Amended) The method of claim 1, further comprising:
providing a code compiler, said code compiler compiling said executable code to run on a second computer platform different from said first computer platform.
3. (Amended) The method of claim 2, wherein said first computer platform comprises a ~~Windows~~ desktop operating system platform and said second computer platform comprises a PLC (programmable logic controller).
4. (Amended) The method of claim 1, wherein said ~~graphical representation of any of said program widgets~~ include user interface widgets that are used for providing ~~can also provide feedback for~~ the runtime monitoring and control of said automation process.

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5. (Original) The method of claim 4, wherein said feedback is a visual change, animation, sound, other form of stimulus, triggering of an event, or a combination thereof.
6. (Amended) The method of claim 4, wherein ~~said graphical representation of any of said the user interface~~ program widgets are further used for acquiring input data to allow ~~can also provide~~ user input capabilities for the runtime monitoring and control of said automation process.
7. (Amended) The method of claim 1, wherein said ~~program~~ widgets include "machine widgets," "programming widgets," and "user interface widgets."
8. (Amended) A computer programming product for use in controlling an automation process, said product, comprising:
a computer-readable medium embodying program code of ~~stored on a computer-readable medium, said computer-readable program code utilizing~~ programming by demonstration tool ~~said computer-readable program code used as both a control program and a visual user interface for said control program~~ for combining programming of a control program and of its user interface and thereby producing the control program and its user interface at the same time, wherein the program by demonstration tool includes:
~~—said computer-readable program code including~~ a library of program widgets, an graphical editor operative to allow editing including manipulating ~~capable of enabling manipulation by a user of a graphical representation of any of said program widgets,~~ an inferencing engine for recording and processing said manipulation to produce executable code, and an input/output module for coupling said ~~program~~ widgets to ~~external~~ input and output signals of ~~an~~ said automation process, ~~wherein such that~~ said executable code is used to control said automation process.

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9. (Amended) The product of claim 8, wherein said ~~computer-readable~~ program code is instantiated on~~operable~~ on a first computer platform, and wherein said programming by demonstration tool ~~product~~ further comprises:
a code compiler, said code compiler compiling said executable code to run on second computer platform different from said first computer platform.
10. (Amended) The product of claim 9, wherein said first computer platform comprises a ~~Windows desktop operating system~~ platform and said second computer platform comprises a PLC (programmable logic controller).
11. (Amended) The product of claim 8, wherein said ~~graphical representation of any of said program~~ widgets include user interface widgets that are used for providing can also provide feedback for the runtime monitoring and control of said automation process.
12. (Original) The product of claim 11, wherein said feedback is a visual change, animation, sound, other form of stimulus, triggering of an event, or a combination thereof.
13. (Amended) The product of claim 11, wherein ~~said graphical representation of any of said the user interface program~~ widgets are further used for acquiring input data to allow can also provide user input capabilities for the runtime monitoring and control of said automation process
14. (Original) The product of claim 8, wherein said program widgets include "machine widgets," "programming widgets," and "user interface widgets."
15. (Original) The product of claim 8, wherein said automation process comprises a home automation process, building automation process, an industrial automation process, or other automation-based process.

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16. (Original) The product of claim 8, wherein said computer-readable medium comprises a floppy disk, a CD-ROM, a hard disk drive, a file downloadable from an internet site, magnetic tape, digital video disk, removable memory drive, or an email file.
17. (Original) The method of claim 2, wherein said automation process comprises a home automation process, building automation process, an industrial automation process, or other automation-based process.
18. (New) A method as in claim 1, wherein the library of widgets is commonly used for programming both the control program and its user interface.
19. (New) A product as in claim 8, wherein the library of widgets is commonly used for programming both the control program and its user interface.
20. (New) A computer programming method, comprising:
activating a programming by demonstration tool;
programming a control program; and programming a user interface for the control program, wherein the programming of the control program and its user interface are combined via the programming by demonstration tool which produces both of them at the same time, the combined programming involving a process of demonstrating behavior using the widgets.
21. (New) A computer programming method as in claim 20, wherein the process of demonstration includes:
setting a state that causes a behavior; and
modifying the state to produce a desired outcome state, wherein a complex behavior requires more than one pair of state and outcome state.

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22. (New) A computer programming method as in claim 21, wherein the inferencing engine infers a complex behavior of an automation system incrementally from a plurality of the state and outcome state pairs.

23. (New) A computer programming method as in claim 21, wherein an example consists of one of the pairs of state and outcome state, such that the inferencing engine infers a complex behavior from a plurality of examples.